

Ambient Air Quality Impact Report
Guardian Industries Corporation
PSD Permit Number: SJ-76-44

This document serves as the statement of basis as required by 40 CFR 124. This document sets forth the legal and factual basis for permit conditions, including references to applicable statutory or regulatory provisions, including provisions under 40 CFR 52.21. This document is for all parties interested in the permit.

I. APPLICANT

Guardian Industries Corporation
11535 Mountain View Ave
Kingsburg, CA 93631

II. PROJECT LOCATION

This existing flat glass plant is located at 11535 Mountain View Ave. in Kingsburg, California.

III. PROJECT DESCRIPTION

The applicant is proposing to rebuild the melting furnace and increase glass manufacturing capacity from 600 to 700 tons per day, and increase the furnace heat capacity from 182 to 212 MM Btu/hr. The rebuilt furnace will be equipped with the following control devices: a high temperature (dry) scrubber to control SO_x emissions, a new electrostatic precipitator to control particulate matter emissions and a selective catalytic reduction (SCR) system to control NO_x emissions. The furnace exhaust will be equipped with a continuous emissions monitoring system (CEMS).

IV. EMISSIONS FROM THE PROJECT

The San Joaquin Valley APCD is currently classified attainment for NO₂, SO₂ and CO. The Guardian facility is currently a major source for NO_x and SO₂. Tables IV-1, IV-2 and IV-3 below summarize the pre-project baseline actual emissions, the post-project emissions based on potential to emit (PTE), and the emission increase/decrease for each pollutant, respectively.

**Table IV-1
Pre-project Baseline Actual Emission Rates**

Pollutant	Tons/year
Nitrogen Oxides (NO _x)	1165.6
Sulfur Oxides (SO ₂)	442.6
Carbon Monoxide (CO)	1.33

**Table IV-2
Maximum (PTE based) Post-project Emission Rates**

Pollutant	Tons/year
Nitrogen Oxides (NO _x)	415.2
Sulfur Oxides (SO ₂)	153.3
Carbon Monoxide (CO)	95.8

**Table IV-3
Emission Increases from Project**

Pollutant	Tons/year
Nitrogen Oxides (NO _x)	- 750.4
Sulfur Oxides (SO ₂)	- 289.3
Carbon Monoxide (CO)	+ 94.5

V. APPLICABILITY OF PREVENTION OF SIGNIFICANT DETERIORATION

The PSD regulations (40 CFR 52.21) define a “major source” as any source type belonging to a list of 28 source categories which emits or has the potential to emit 100 tons per year (tpy) or more of any attainment pollutant regulated under the Clean Air Act, or any other source type which emits or has the potential to emit such pollutants in amounts equal to or greater than 250 tpy. Since flat glass manufacturing plants are not one of the 28 source categories specified in the PSD regulations, the 250 tpy threshold applies to this project.

Fresno County is classified as a federal non-attainment area for PM₁₀ and ozone, therefore PM₁₀, NO_x and VOC (ozone precursors) emissions will be regulated by the New Source Review (NSR) permit issued by San Joaquin Valley Unified Air Pollution Control District (District) and are not addressed by this PSD evaluation.

As shown in Table IV-1 above, the facility is a major source for the attainment pollutants NO₂ and SO₂. Using the data provided in Tables IV-1 through IV-3 above, Table V-1 below summarizes the projected emission increases and significant thresholds for each attainment pollutant. As shown by the data provided by the applicant and summarized in

Table V-1, the project will not result in a significant increase of any attainment pollutant subject to the PSD regulations. Accordingly, the proposed project does not trigger any major source PSD requirements.

Table IV-4
Significant Emission Threshold Evaluation (tons per year)

Pollutant	Projected Increase	Significant Thresholds	Significant Increase?
Nitrogen Oxides (NO _x)	- 750.4	40	No
Sulfur Oxides (SO ₂)	- 289.3	40	No
Carbon Monoxide (CO)	+ 94.5	100	No

VI. BEST AVAILABLE CONTROL TECHNOLOGY

PSD regulations require that a Best Available Control Technology (BACT) determination be made for each pollutant subject to major PSD review. As noted in Section V above, this project does not trigger a major PSD review, therefore the application of BACT is not required for this project.

It should be noted that the proposed project did trigger major source NSR requirements, which are implemented by the San Joaquin Valley APCD (District) as the local permitting authority. The District permit will impose California BACT (federal LAER) requirements as appropriate for this project, pursuant to District Rule 2201 – New and Modified Stationary Source Review.

VII. REVISED EMISSION LIMITS

As part of this minor PSD permit revision, the applicant requested that EPA update its current PSD permit to be consistent with the NSR requirements imposed by the District. EPA has made the changes as requested. The NO_x and SO_x emission limits imposed in the revised permit are significantly less than in the current PSD permit, and a condition has been added, consistent with the District permit, to ensure CO emissions do not exceed the significance threshold of 100 tpy.

A slightly more stringent emission limit of 20.4 lb/hr for PM₁₀ has been included to replace the existing 22 lb/hr PM emission limit. EPA believes that this is appropriate based on information contained in AP-42 Section 11.15 – Glass Manufacturing. AP42 states that PM₁₀ makes up approximately 95% of all PM emissions. If this 95% factor is applied to the current PM emission limit of 22 lbs/hr, the resulting PM₁₀ emission limit would be 20.9 lb/hr, which is slightly higher than the proposed limit. In addition, the District is non-attainment for PM₁₀ and has set the PM10 emission limit as part of the BACT/LAER major NSR determination for this project. The new lower emission limit is

included in this minor PSD permit modification to ensure ongoing compliance with the current PSD permit limit of 22 lbs PM per hour.

VIII. AIR QUALITY IMPACTS

As noted in Section V of this review, this project will not result in a major PSD modification; therefore an Air Quality Impact Analysis is not required.

IX. ADDITIONAL IMPACT ANALYSIS

As noted in Section V of this review, this project will not result in a major PSD modification; therefore no additional Impact Analysis is required.

X. ENDANGERED SPECIES ACT

Pursuant to Section 7 of the Endangered Species Act (ESA), 16 U.S.C. §1536, and its implementing regulations at 50 C.F.R. Part 402, EPA is required to ensure that any action authorized, funded, or carried out by EPA is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of such species' designated critical habitat. EPA determined that this PSD permitting action is subject to ESA Section 7 requirements.

Since this project will not result in any new construction outside the current footprint of the facility, and NO_x and SO₂ emissions will be reduced by several hundred tons per year, and the increase of CO emissions (94.5 tpy) is below the significance level for CO emissions, EPA concludes that the project will have no effect on any endangered or threatened species or designated critical habitat.

XII. CONCLUSION AND ACTION

Based on the information supplied by the Applicant, and the evaluation provided above which determined this project will not result in a major PSD modification, EPA is proposing to issue a modified PSD permit with the attached draft permit conditions (PSD Permit number SJ 76-44).